

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An image processing apparatus comprising:

~~an image data control unit~~ a process controller connected to a first bus and connected
to at least one of a) an image reading unit for reading image data, ~~b) an image memory~~
~~control unit for controlling image memory so as to write or read image data in or from the~~
~~image memory,~~ c) b) an image processing unit for subjecting image data to image processing,
and c) such as editing, d) an image writing unit for writing image data onto a recording
medium, and

a system controller connected to a second bus and connected to at least one of d) an
image memory control unit for controlling image memory so as to write or send image data in
or from an image memory, and e) an image data transmission/reception unit for transmitting
and receiving image data with an external device,

said ~~image data control unit~~ process controller receiving first image data read-in by
said image reading unit, and/or second ~~image data read-out by said image memory control~~
~~unit,~~ and/or third image data subjected to image processing by said image processing unit,
said system controller receiving third image data read-out by said image memory control unit,
and/or fourth image data received by said image data transmission/reception unit, and said
~~image data control unit~~ process controller and said system controller transmitting the first
image data and/or the second image data and/or the third image data and/or the fourth image
data to said image memory control unit and/or said image processing unit and/or said image
writing unit and/or said image data transmission/reception unit; and

a switching unit which provides controls for switching an access right to a path to be
used when image data is transmitted or received between said image data control unit, said

image reading unit, said image memory control unit, said image processing unit, said image writing unit, or said image data transmission/reception unit,

wherein both the system controller and the process controller provide controls for allocation of jobs.

Claim 2 (Currently Amended): The image processing apparatus according to claim 1, wherein said image memory control unit subjects the image data to be written in or the read-out image data to image processing ~~such as~~ of editing.

Claim 3 (Original): The image processing apparatus according to claim 2, wherein said image memory control unit subjects the image data to be written in or the read-out image data to the processing for rotation of the image.

Claim 4 (Original): The image processing apparatus according to claim 2, wherein said image memory control unit subjects the image data to be written in or the read-out image data to the processing for scaling the image.

Claim 5 (Original): The image processing apparatus according to claim 1, wherein said switching unit switches a path based on time division when accesses to said path conflict with one another by different image data.

Claim 6 (Original): The image processing apparatus according to claim 1, wherein said image processing unit controls image processing based on time division when the image processing conflicts with one another by different image data.

Claim 7 (Original): The image processing apparatus according to claim 1, wherein said switching unit and said image processing unit are controlled by different control units.

Claim 8 (Currently Amended): An image processing apparatus comprising;
an image data control unit which is connected to at least one of a) an image reading unit for reading image data, b) an image memory control unit for controlling image memory so as to write or read image data in or from the image memory, c) an image processing unit for subjecting image data to image processing ~~such as editing~~, and d) an image writing unit for writing image data onto a recording medium, said image data control unit receiving first image data read-in by said image reading unit, and/or second image data read-out by said image memory control unit, and/or third image data subjected to image processing by said image processing unit, and said image data control unit transmitting the first image data and/or the second image data and/or the third image data to said image memory control unit and/or said image processing unit and/or said image writing unit; and

a multiplexing control unit which, when image data to be transmitted to said image data control unit conflicts with one another, multiplexes the image data in conflict with one another,

wherein said image data control unit receives the image data multiplexed by said multiplexing control unit.

Claim 9 (Original): The image processing apparatus according to claim 8, wherein said multiplexing control unit adds control data for controlling the multiplexed image data to the multiplexed image data.

Claim 10 (Original): The image processing apparatus according to claim 9, wherein the control data includes information concerning a multiplexing mode applied to the multiplexed image data, and/or information concerning respective destinations of the multiplexed image data.

Claim 11 (Currently Amended): An image processing apparatus comprising:
an image data control unit which is connected to at least one of a) an image reading unit for reading image data, b) an image memory control unit for controlling image memory so as to write or read image data in or from the image memory, c) an image processing unit for subjecting image data to image processing ~~such as editing~~, d) an image writing unit for writing image data to a recording medium, and e) an image data transmission/reception unit for transmitting and receiving image data with an external device, said image data control unit receiving first image data read-in by said image reading unit, and/or second image data read-out by said image memory control unit, and/or third image data subjected to image processing by said image processing unit, and/or fourth image data received by said image data transmission/reception unit, and said image data control unit transmitting the first image data and/or the second image data and/or the third image data and/or the fourth image data to said image memory control unit and/or said image processing unit and/or said image writing unit and/or said image data transmission/reception unit; and
a multiplexing control unit which, when image data to be transmitted to said image data control unit conflicts with one another, multiplexes the image data in conflict with one another,
wherein said image data control unit receives the image data multiplexed by said multiplexing control unit.

Claim 12 (Original): The image processing apparatus according to claim 11, wherein said multiplexing control unit adds control data for controlling the multiplexed image data to the multiplexed image data.

Claim 13 (Original): The image processing apparatus according to claim 12, wherein the control data includes information concerning a multiplexing mode applied to the multiplexed image data, and/or information concerning respective destinations of the multiplexed image data.

Claim 14 (Currently Amended): An image processing apparatus comprising:
~~an image data process control means connected a first bus and connected to at least one of a) an image reading means for reading image data, b) an image memory control means for controlling image memory so as to write or read image data in or from the image memory, e) an image b) processing means for subjecting image data to image processing such as editing, d) an image, and (c) writing means for writing image data onto a recording medium, and~~

~~system control means connected to a second bus and connected to at least one of d) an image memory control means for controlling image memory so as to write or send image data in or from an image memory, and e) an image data transmission/reception means for transmitting and receiving image data with an external device,~~

~~said image data process control means receiving first image data read-in by said image reading means, and/or second image data read-out by said image memory control means, and/or third image data subjected to image processing by said image processing means, said system control means receiving third image data read-out by said image memory control unit, and/or fourth image data received by said image data transmission/reception~~

means, and said ~~image data~~ process control means and system control means transmitting the first image data and/or the second image data and/or the third image data and/or the fourth image data to said ~~image~~ memory control means and/or said ~~image~~ processing means and/or said ~~image~~ writing means and/or said ~~image data~~ transmission/reception means; and

~~a switching~~ means for providing controls for switching an access right to a path to be used when image data is transmitted or received between said ~~image data~~ control means, said ~~image~~ reading means, said ~~image~~ memory control means, said ~~image~~ processing means, said ~~image~~ writing means, or said ~~image data~~ transmission/reception means,

wherein both the system control means and the process control means provide controls for allocation of jobs.

Claim 15 (Currently Amended): The image processing apparatus according to claim 14, wherein said ~~image~~ memory control means subjects the image data to be written in or the read-out image data to image processing ~~such as~~ of editing.

Claim 16 (Currently Amended): The image processing apparatus according to claim 15, wherein said ~~image~~ memory control means subjects the image data to be written in or the read-out image data to the processing for rotation of the image.

Claim 17 (Currently Amended): The image processing apparatus according to claim 15, wherein said ~~image~~ memory control means subjects the image data to be written in or the read-out image data to the processing for scaling the image.

Claim 18 (Original): The image processing apparatus according to claim 14, wherein said switching means switches a path based on time division when accesses to said path conflict with one another by different image data.

Claim 19 (Currently Amended): The image processing apparatus according to claim 14, wherein said ~~image~~ processing means controls image processing based on time division when the image processing conflicts with one another by different image data.

Claim 20 (Currently Amended): The image processing apparatus according to claim 14, wherein said ~~switching~~ means for providing controls for switching and said ~~image~~ processing means are controlled by different control means.

Claim 21 (Currently Amended): An image processing apparatus comprising:
~~an image data~~ control means which is connected to at least one of a) ~~an image~~ reading means for reading image data, b) ~~an image~~ memory control means for controlling image memory so as to write or read image data in or from the image memory, c) ~~an image~~ processing means for subjecting image data to image processing ~~such as editing~~, and d) ~~an image~~ writing means for writing image data onto a recording medium, said ~~image data~~ control means receiving first image data read-in by said ~~image~~ reading means, and/or second image data read-out by said ~~image~~ memory control means, and/or third image data subjected to image processing by said ~~image~~ processing means, and said ~~image data~~ control means transmitting the first image data and/or the second image data and/or the third image data to said ~~image~~ memory control means and/or said ~~image~~ processing means and/or said ~~image~~ writing means; and

~~a multiplexing control means which~~ for, when image data to be transmitted to said ~~image data control means conflicts with one another, multiplexes~~ multiplexing the image data in conflict with one another,

wherein said ~~image data control means receives the image data multiplexed by said means for multiplexing control means.~~

Claim 22 (Currently Amended): The image processing apparatus according to claim 21,

wherein said means for multiplexing ~~control means~~ adds control data for controlling the multiplexed image data to the multiplexed image data.

Claim 23 (Original): The image processing apparatus according to claim 22, wherein the control data includes information concerning a multiplexing mode applied to the multiplexed image data, and/or information concerning respective destinations of the multiplexed image data.

Claim 24 (Currently Amended): An image processing apparatus comprising:

~~an image data control means which is connected to at least one of a)~~ ~~an image~~ reading means for reading image data, b) ~~an image~~ memory control means for controlling image memory so as to write or read image data in or from the image memory, c) ~~an image~~ processing means for subjecting image data to image processing ~~such as editing~~, d) ~~an image~~ writing means for writing image data to a recording medium, and e) ~~an image data~~ transmission/reception means for transmitting and receiving image data with an external device, said ~~image data control means receiving first image data read-in by said image~~ reading means, and/or second image data read-out by said ~~image~~ memory control means,

and/or third image data subjected to image processing by said ~~image~~ processing means,
and/or fourth image data received by said ~~image data~~ transmission/reception means, and said
~~image data~~ control means transmitting the first image data and/or the second image data
and/or the third image data and/or the fourth image data to said ~~image~~ memory control means
and/or said ~~image~~ processing means and/or said ~~image~~ writing means and/or said ~~image data~~
transmission/reception means; and

~~a multiplexing control means which~~ for, when image data to be transmitted to said
image data control means conflicts with one another, ~~multiplexes~~ multiplexing the image data
in conflict with one another,

wherein said image data control means receives the image data multiplexed by said
means for multiplexing ~~control means~~.

Claim 25 (Currently Amended): The image processing apparatus according to claim
24,

wherein said means for multiplexing ~~control means~~ adds control data for controlling
the multiplexed image data to the multiplexed image data.

Claim 26 (Original): The image processing apparatus according to claim 25, wherein
the control data includes information concerning a multiplexing mode applied to the
multiplexed image data, and/or information concerning respective destinations of the
multiplexed image data.

Claim 27 (Currently Amended): An image processing method comprising:
an image data receiving ~~step~~ of receiving multiplexed image data at a same image
data control unit from any one or plural processing units to perform different processing on

image data ~~such as~~ including at least one of reading, storage, image processing (~~processing or editing~~), writing, or transmission/reception of the image data;

an image data control information acquiring ~~step~~ of acquiring image data control information including information concerning contents of the processing on the multiplexed image data received in the image data receiving ~~step~~;

a target processing unit determining ~~step~~ of determining a target processing unit, to which the image data received in the image data receiving ~~step~~ is to be transmitted, based on the image data control information acquired in the image data control information acquiring ~~step~~; and

a transmitting ~~step~~ of transmitting the multiplexed image data to the target processing unit determined in the target processing unit determining ~~step~~.

Claim 28 (Currently Amended): An image processing method comprising:

an image data receiving ~~step~~ of receiving multiplexed image data at a same image data control unit from any one or ~~many~~ plural processing units to perform different processing on image data ~~such as~~ including at least one of reading, storage, image processing (~~processing or editing~~), writing, or transmission/reception of the image data;

an image data control information acquiring ~~step~~ of acquiring image data control information including information concerning contents of the processing on the multiplexed image data received in the image data receiving ~~step~~;

a target processing unit determining ~~step~~ of determining a target processing unit, to which the image data received in the image data receiving ~~step~~ is to be transmitted, based on the image data control information acquired in the image data control information acquiring ~~step~~;

an extracting ~~step~~ of extracting discrete image data from the multiplexed image data;
and

a transmitting ~~step~~ of transmitting the image data extracted in the extracting ~~step~~ to
the target processing unit determined in the target processing unit determining ~~step~~.

Claim 29 (Currently Amended): An image processing method comprising:

an image data receiving ~~step~~ of receiving multiplexed image data at a same image data control unit from any or ~~many plural~~ processing units to perform different processing on image data ~~such as~~ including at least one of reading, storage, image processing (~~processing or editing~~), writing, or transmission/reception of the image data;

an image data control information acquiring ~~step~~ of acquiring image data control information including information concerning contents of the processing on the multiplexed image data received in the image data receiving ~~step~~;

a target processing unit determining ~~step~~ of determining a target processing unit, to which the image data received in the image data receiving ~~step~~ is to be transmitted, based on the image data control information acquired in the image data control information acquiring ~~step~~;

a multiplexing ~~step~~ of multiplexing the image data; and

a transmitting ~~step~~ of transmitting the image data multiplexed in the multiplexing ~~step~~ to the target processing unit determined in the target processing unit determining ~~step~~.

Claim 30 (Currently Amended): A computer readable medium for storing instructions, which when executed by a computer, causes the computer to perform:

an image data receiving ~~step~~ of receiving multiplexed image data at a same image data control unit from any one or plural processing units to perform different processing on

image data ~~such as~~ including at least one of reading, storage, image processing (~~processing or editing~~), writing, or transmission/reception of the image data;

an image data control information acquiring ~~step~~ of acquiring image data control information including information concerning contents of the processing on the multiplexed image data received in the image data receiving ~~step~~;

a target processing unit determining ~~step~~ of determining a target processing unit, to which the image data received in the image data receiving ~~step~~ is to be transmitted, based on the image data control information acquired in the image data control information acquiring ~~step~~; and

a transmitting ~~step~~ of transmitting the multiplexed image data to the target processing unit determined in the target processing unit determining ~~step~~.

Claim 31 (Currently Amended): A computer readable medium for storing instructions, which when executed by a computer, causes the computer to perform:

an image data receiving ~~step~~ of receiving multiplexed image data at a same image data control unit from any one or ~~many plural~~ processing units to perform different processing on image data ~~such as~~ including at least one of reading, storage, image processing (~~processing or editing~~), writing, or transmission/reception of the image data;

an image data control information acquiring ~~step~~ of acquiring image data control information including information concerning contents of the processing on the multiplexed image data received in the image data receiving ~~step~~;

a target processing unit determining ~~step~~ of determining a target processing unit, to which the image data received in the image data receiving ~~step~~ is to be transmitted, based on the image data control information acquired in the image data control information acquiring ~~step~~;

an extracting ~~step~~ of extracting discrete image data from the multiplexed image data;
and

a transmitting ~~step~~ of transmitting the image data extracted in the extracting ~~step~~ to the target processing unit determined in the target processing unit determining ~~step~~.

Claim 32 (Currently Amended): A computer readable medium for storing instructions, which when executed by a computer, causes the computer to perform:

an image data receiving ~~step~~ of receiving multiplexed image data at a same image data control unit from any or ~~many plural~~ processing units to perform different processing on image data ~~such as~~ including at least one of reading, storage, image processing (~~processing or editing~~), writing, or transmission/reception of the image data;

an image data control information acquiring ~~step~~ of acquiring image data control information including information concerning contents of the processing on the multiplexed image data received in the image data receiving ~~step~~;

a target processing unit determining ~~step~~ of determining a target processing unit, to which the image data received in the image data receiving ~~step~~ is to be transmitted, based on the image data control information acquired in the image data control information acquiring ~~step~~;

a multiplexing ~~step~~ of multiplexing the image data; and

a transmitting ~~step~~ of transmitting the image data multiplexed in the multiplexing ~~step~~ to the target processing unit determined in the target processing unit determining ~~step~~.

Claim 33 (New): An image processing apparatus comprising:

an image data control unit connected to at least one of a) an image reading unit for reading image data, b) an image memory control unit for controlling image memory so as to

write or read image data in or from the image memory, c) an image processing unit for subjecting image data to image processing, d) an image writing unit for writing image data onto a recording medium, and e) an image data transmission/ reception unit for transmitting and receiving image data with an external device, said image data control unit receiving first image data read-in by said image reading unit, and/or second image data read-out by said image memory control unit, and/or third image data subjected to image processing by said image processing unit, and/or fourth image data received by said image data transmission/reception unit, and said image data control unit transmitting the first image data and/or the second image data and/or the third image data and/or the fourth image data to said image memory control unit and/or said image processing unit and/or said image writing unit and/or said image data transmission/reception unit; and

a switching unit which provides controls for switching an access right to a path to be used when image data is transmitted or received between said image data control unit, said image reading unit, said image memory control unit, said image processing unit, said image writing unit, or said image data transmission/reception unit,

wherein said image processing unit controls image processing based on time division when the image processing conflicts with one another by different image data.

Claim 34 (New): The image processing apparatus according to claim 33, wherein said image memory control unit subjects the image data to be written in or the read-out image data to image processing of editing.

Claim 35 (New): The image processing apparatus according to claim 34, wherein said image memory control unit subjects the image data to be written in or the read-out image data to the processing for rotation of the image.

Claim 36 (New): The image processing apparatus according to claim 34, wherein said image memory control unit subjects the image data to be written in or the read-out image data to the processing for scaling the image.

Claim 37 (New): The image processing apparatus according to claim 34, wherein said switching unit and said image processing unit are controlled by different control units.

Claim 38 (New): An image processing apparatus comprising:
control means connected to at least one of a) reading means for reading image data, b) memory control means for controlling image memory so as to write or read image data in or from the image memory, c) processing means for subjecting image data to image processing, d) writing means for writing image data onto a recording medium, and e) an transmission/reception means for transmitting and receiving image data with an external device, said control means receiving first image data read-in by said reading means, and/or second image data read-out by said memory control means, and/or third image data subjected to processing by said processing means, and/or fourth image data received by said transmission/reception means, and said control means transmitting the first image data and/or the second image data and/or the third image data and/or the fourth image data to said memory control means and/or said processing means and/or said writing means and/or said transmission/reception means; and
means for providing controls for switching an access right to a path to be used when image data is transmitted or received between said control means, said reading means, said memory control means, said processing means, said writing means, or said transmission/reception means,

wherein said image processing means controls image processing based on time division when the image processing conflicts with one another by different image data.

Claim 39 (New): The image processing apparatus according to claim 38, wherein said memory control means subjects the image data to be written in or the read-out image data to image processing of editing.

Claim 40 (New): The image processing apparatus according to claim 39, wherein said memory control means subjects the image data to be written in or the read-out image data to the processing for rotation of the image.

Claim 41 (New): The image processing apparatus according to claim 39, wherein said memory control means subjects the image data to be written in or the read-out image data to the processing for scaling the image.

Claim 42 (New): The image processing apparatus according to claim 39, wherein said means for providing controls for switching and said processing means are controlled by different control means.